## ABSTRACT OF THE DISCLOSURE

In a multiplex power steering device for a wheeled vehicle, there is provided a control unit which includes a feedback computing part. The feedback computing part comprises an operating force estimating section that, by analyzing an output from a controlled system of actuators of a steering mechanism, estimates an output of the actuators, a disturbance estimating section that, by comparing a control signal actually fed to the actuators and the estimated output of the actuators, estimates a disturbance applied to the controlled system from the exterior, and a disturbance compensating section that adjusts the control signal in a manner to remove the estimated disturbance therefrom. The control unit calculates the control signal on the assumption that the actuators constitute a single actuator.